

REMARKS

This Amendment responds to the Office Action dated October 31, 2006 in which the Examiner rejected claim 20 under 35 U.S.C. § 112 second paragraph, rejected claims 10 and 18 under 35 U.S.C. § 101 and rejected claims 1-10 and 12-20 under 35 U.S.C. § 103.

As indicated above, claim 20 has been amended in order to provide proper antecedent basis. Therefore, Applicant respectfully requests the Examiner withdraws the rejection to claim 20 under 35 U.S.C. § 112 second paragraph.

As indicated above, claim 10 has been amended to be directed to statutory subject matter. Therefore, Applicant respectfully requests the Examiner withdraws the rejection to claims 10 and 18 under 35 U.S.C. § 101.

As indicated above, the claims have been amended in order to make explicit what is implicit in the claims. The amendment is unrelated to a statutory requirement for patentability.

Claims 1 and 7 claim a motion image processor, claim 9 claims a motion image processing method, claim 10 claims a computer-readable recording medium encoded with a computer program and claims 12 claims an image sensing apparatus. The motion image processor, motion image processing method, computer-readable recording medium and image sensing apparatus select motion image correction parameters which are maintained for each frame image in a current scene until the next scene change. Thus, as claimed in claims 1, 7, 9, 10 and 12, the present invention can rapidly correct a motion image while reducing the amount of calculation required to correct the motion image. The prior art does not show, teach or suggest the invention as claimed in claims 1, 7, 9, 10, 12 and 13.

Claims 1-3, 6-10 and 12 were rejected under 35 U.S.C. §103 as being unpatentable over *Sekine et al.* (U.S. Patent No. 6,049,354) in view of *White et al.* (U.S. Patent No. 5,721,427).

Sekine et al. is directed to correctly performing image-shake correction even when a scene change occurs. (Col. 2, line 65-67). Embodiment 1 in Figure 3 discloses resetting an image correction vector CV_i to zero when a field which immediately follows a scene change so that the currently accumulated value is reset (col. 5, lines 62-65). In the second embodiment shown in Figure 5, the image plane is slowly centered for a time of approximately one second after a scene change so that the image is prevented from vibrating abruptly to a great extent (col. 8, lines 26-32).

Thus, *Sekine et al.* merely discloses continuously calculating a motion vector parameter CV_i during each field period until the scene is changed, and then a new calculation occurs. However, as claimed in claims 1, 7, 9, 10 and 12, correction parameters are selected only when the scene change information is acquired and the selected correction parameters are maintained until the next scene change information occurs. However, *Sekine et al.* teaches away from the claimed invention since the motion vector parameter is continuously updated for each field until a scene change occurs and then the vector is slowly centered.

White et al. is directed to correcting image non-uniformities in an infrared imaging system. (Column 1, lines 10-12). A trigger circuit selectively enables a scene-based non-uniformity correction circuit to update the current scene-based non-uniformity correction term in response to a motion signal from a motion detector. (Column 2, lines 20-23).

Thus, *White et al.* merely discloses updating a non-uniformity correction term based upon a motion detector. Nothing in *White et al.* shows, teaches or suggests detecting scene change. Furthermore, nothing in *White et al.* shows, teaches or suggests selecting correction parameters when a scene change information is acquired and maintaining the selected correction parameters for each frame image until a next scene change is acquired as claimed in claims 1, 7, 9, 10 and 12. Rather, *White et al.* merely discloses updating a correction term in response to motion.

The combination of *Sekine et al.* and *White et al.* would merely suggest to continuously change the correction parameters for each field until a scene change is detected as taught by *Sekine et al.* and to update non-uniformity correction processing when motion is detected as taught by *White et al.* Thus, nothing in the combination of the references shows, teaches or suggests correcting a frame image based on the same selected set of correction parameters until a next scene change occurs as claimed in claims 1, 7, 9, 10 and 12. Therefore, Applicant respectfully requests the Examiner withdraws the rejection to claims 1, 7, 9, 10, and 12 under 35 U.S.C. §103.

Claims 2-3, 6, 8 depend from claims 1 and 7 and recite additional features. Applicant respectfully submits that claims 2-3, 6 and 8 would not have been obvious within the meaning of 35 U.S.C. §103 over *Sekine et al.* and *White et al.* at least for the reasons as set forth above. Therefore, Applicant respectfully requests the Examiner withdraws the rejection to claims 2-3, 6 and 8 under 35 U.S.C. §103.

Claims 4-5 were rejected under 35 U.S.C. §103 as being unpatentable over *Sekine et al.* in view of *White et al.* and further in view of *Horiike* (U.S. Patent No. 6,353,683).

Applicant respectfully traverses the Examiner's rejection of the claims under 35 U.S.C. §103. The claims have been reviewed in light of the Office Action, and for reasons which will be set forth below, Applicant respectfully requests the Examiner withdraws the rejection to the claims and allows the claims to issue.

As discussed above, since nothing in the combination of *Sekine et al.* and *White et al.* show, teach or suggest the primary features as claimed in claim 1, Applicant respectfully submits that the combination of the primary references with the secondary reference to *Horiike* will not overcome the deficiencies of the primary references. Therefore, Applicant respectfully requests the Examiner withdraws the rejection to claims 4-5 under 35 U.S.C. §103.

Claims 13-14 were rejected under 35 U.S.C. §103 as being unpatentable over *Sekine et al.* in view of *Horiike*.

As discussed above, *Sekine et al.* merely discloses continuously calculating a motion vector parameter until a scene is changed. However, as claimed in claim 13, a set of correction parameters are not changed until a next scene change. However, *Sekine et al.* teaches away from the present invention since the reference continuously calculates parameters until a scene is changed.

Horiike appears to disclose a method and an apparatus which are capable of performing switching of a process for generating a prediction signal for a target image signal between a lightly loaded process and a heavily loaded process, depending upon the calculation load, when coding or decoding an image signal, thereby performing motion prediction or motion compensation with high efficiency while suppressing adverse effects on a regenerated video, and a data storage medium which contains a program for implementing image processing by the method and the apparatus in a computer system. (Col. 4, lines 57-67)

Thus, *Horiike* merely discloses performing motion prediction. Nothing in *Horiike* shows, teaches or suggests a set of correction parameters which remain unchanged until a scene change as claimed in claim 13. Rather, *Horiike* merely discloses predicting motion.

Since neither *Sekine et al.* or *Horiike* show, teach or suggest correction parameters which are unchanged until a next scene change as claimed in claim 13, Applicant respectfully requests the Examiner withdraws the rejection to claim 13 under 35 U.S.C. § 103.

Claim 14 depends from claim 13 and recites additional features. Applicant respectfully submits that claim 14 would not have been obvious within the meaning of 35 U.S.C. § 103 over *Sekine et al.* and *Horiike* at least for the reasons as set forth above. Therefore, Applicant respectfully requests the Examiner withdraws the rejection to claim 14 under 35 U.S.C. § 103.

Claims 15-19 were rejected under 35 U.S.C. § 103 as being unpatentable over *Sekine et al.* in view of *White et al.* and further in view of *Prentice et al.* (U.S. Publication No. 2003/0030729). Claim 20 was rejected under 35 U.S.C. § 103 as being unpatentable over *Sekine et al.* in view of *Horiike* and further in view of *Prentice et al.*

Applicant respectfully traverses the Examiner's rejection of the claims under 35 U.S.C. § 103. The claims have been reviewed in light of the Office Action, and for reasons which will be set forth below, Applicant respectfully requests the Examiner withdraws the rejection to the claims and allows the claims to issue.

As discussed above, since nothing in *Sekine et al.* and *White et al.* or *Sekine et al.* and *Horiike* show, teach or suggest the primary features as claimed in claims 1, 7, 9-10, and 12, Applicant respectfully submits that the combination of the primary references with the secondary reference to *Prentice et al.* will not overcome the deficiencies of the primary references. Therefore, Applicant respectfully requests the Examiner withdraws the rejection to claims 15-20 under 35 U.S.C. § 103.

Thus it now appears that the application is in condition for reconsideration and allowance. Reconsideration and allowance at an early date are respectfully requested.

If for any reason the Examiner feels that the application is not now in condition for allowance, the Examiner is requested to contact, by telephone, the Applicant's undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed within the currently set shortened statutory period, Applicant respectfully petitions for an appropriate extension of time. The fees for such extension of time may be charged to our Deposit Account No. 02-4800.


In the event that any additional fees are due with this paper, please charge our Deposit Account No. 02-4800.

Respectfully submitted,

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Date: January 29, 2007

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